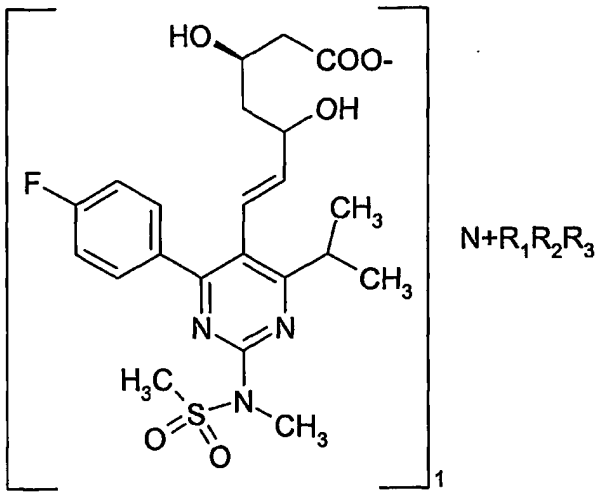
We Claim:

1. Amine salts of rosuvastatin of Formula I



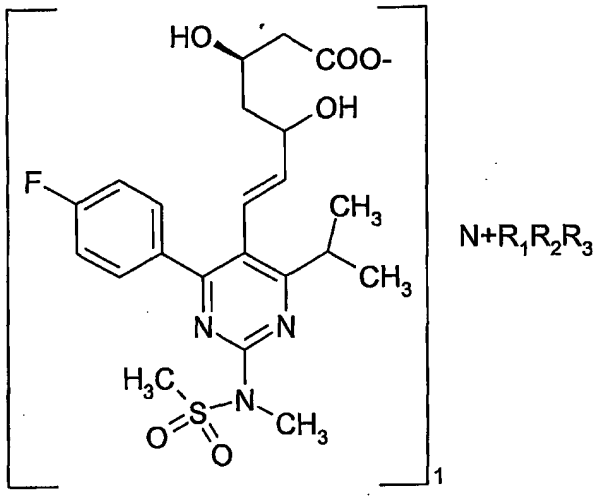
or solvate, hydrate, crystalline or amorphous form thereof, in which the amine residue has a Formula $NR_1R_2R_3$ (wherein independently R_1, R_2 and R_3 are H, straight or branched chain C_{1-15} alkyl or hydroxyalkyl, C_{3-10} single or fused ring optionally substituted cycloalkyl, optionally substituted aryl, optionally substituted aralkyl, alkylcycloalkyl, or independently R_1, R_2 and R_3 combine with each other to form a C_{3-7} membered cycloalkyl ring or heterocyclic residue containing one or more heteroatoms), with the proviso that amine is not ammonia, methylamine, ethylamine, diethanolamine, tri(hydroxymethyl)-methylamine, benzylamine, or 4-methoxybenzylamine.

2. The amine salts of rosuvastatin of claim 1, having purity above 99% and diastereomeric impurity less than 0.5%.

3. The compound according to claim 2, wherein the purity is more than 99.5% and diastereomeric impurity less than 0.25%.

4. The compound according to claim 3, wherein the purity is more than 99.75% and diastereomeric impurity less than 0.15%.

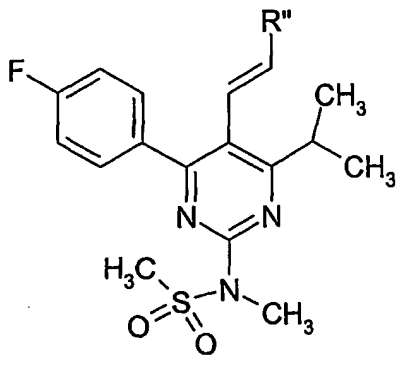
5. A process for the preparation of amine salts of rosuvastatin of Formula I

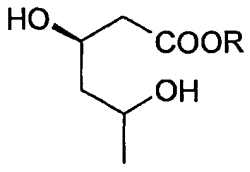


or solvate, hydrate, crystalline or amorphous form thereof, in which the amine residue has a Formula $NR_1R_2R_3$ (wherein independently R_1, R_2 and R_3 are H, straight or branched chain C_{1-15} alkyl or hydroxyalkyl, C_{3-10} single or fused ring optionally substituted cycloalkyl, optionally substituted aryl, optionally substituted aralkyl, alkylcycloalkyl, or independently R_1, R_2 and R_3 combine with each other to form a C_{3-7} membered cycloalkyl ring or heterocyclic residue containing one or more heteroatoms), with the proviso that amine is not ammonia, methylamine, ethylamine, diethanolamine, tri(hydroxymethyl)-methylamine, benzylamine, or 4-methoxybenzylamine,

the process comprising:

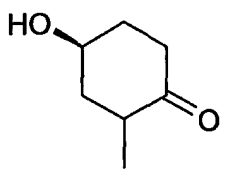
a) treating rosuvastatin of Formula II





FORMULA A

OR

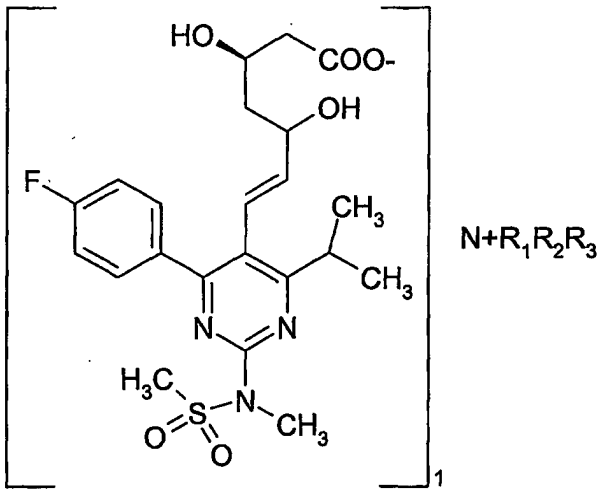


FORMULA B

with an amine of Formula $NR_1R_2R_3$ (wherein independently R_1, R_2 and R_3 are H, straight or branched chain C_{1-15} alkyl or hydroxyalkyl, C_{3-10} single or fused ring optionally substituted cycloalkyl, optionally substituted aryl, optionally substituted aralkyl, alkylcycloalkyl, or independently R_1, R_2 and R_3 combine with each other to form a C_{3-7} membered cycloalkyl ring or heterocyclic residue containing one or more heteroatoms), with a proviso that the amine is not selected from ammonia, methylamine, ethylamine, diethanolamine, tri(hydroxymethyl)-methylamine, benzylamine, or 4-methoxybenzylamine; and

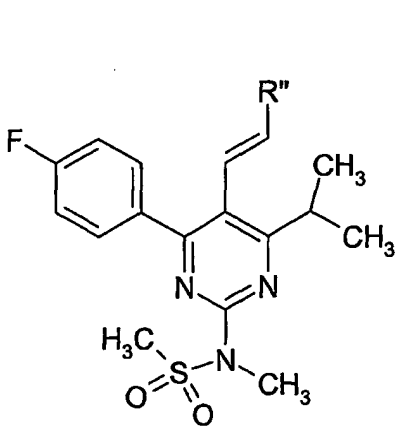
b) isolating the amine salt of rosuvastatin of Formula I.

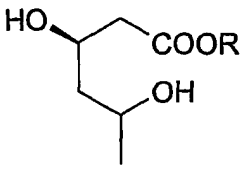
6. Amine salts of rosuvastatin of Formula I



or solvate, hydrate, crystalline or amorphous form thereof, in which the amine residue has a Formula $NR_1R_2R_3$ (wherein independently R_1, R_2 and R_3 are H, straight or branched chain C_{1-15} alkyl or hydroxyalkyl, C_{3-10} single or fused ring optionally substituted cycloalkyl, optionally substituted aryl, optionally substituted aralkyl, alkylcycloalkyl, or independently R_1, R_2 and R_3 combine with each other to form a C_{3-7} membered cycloalkyl ring or heterocyclic residue containing one or more heteroatoms), with a proviso that the amine is not selected from ammonia, methylamine, ethylamine, diethanolamine, tri(hydroxymethyl)-methylamine, benzylamine, or 4-methoxybenzylamine as intermediates for the preparation of rosuvastatin or pharmaceutically acceptable salts, esters and lactones thereof.

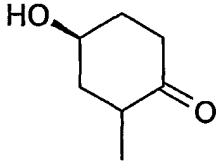
7. A process for preparation of amorphous or crystalline rosuvastatin calcium of Formula IIa from amine salt of Formula I,





FORMULA A

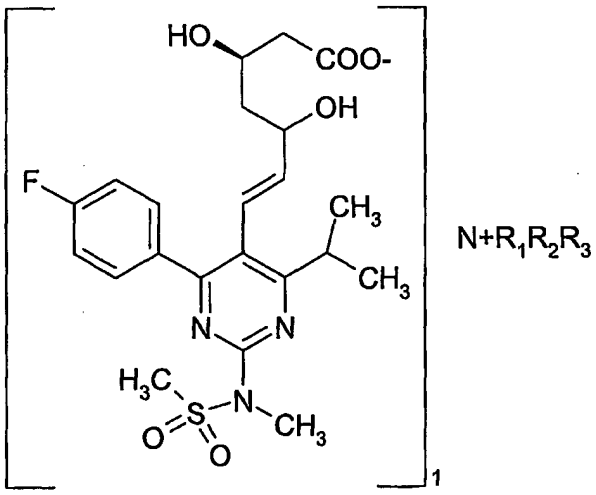
OR



FORMULA B

wherein the process comprises of

a) treating an amine salt of Formula I,



or solvate, hydrate, crystalline or amorphous form thereof, in which the amine residue has a Formula $NR_1R_2R_3$ (wherein independently R_1, R_2 and R_3 are H, straight or branched chain C_{1-15} alkyl or hydroxyalkyl, C_{3-10} single or fused ring optionally substituted cycloalkyl, optionally substituted aryl, optionally substituted aralkyl, alkylcycloalkyl, or independently R_1, R_2 and R_3 combine with each other to form a C_3-

$_7$ membered cycloalkyl ring or heterocyclic residue containing one or more heteroatoms), with a proviso that the amine is not selected from ammonia, methylamine, ethylamine, diethanolamine, tri(hydroxymethyl)-methylamine, benzylamine, or 4-methoxybenzylamine, with an acid;

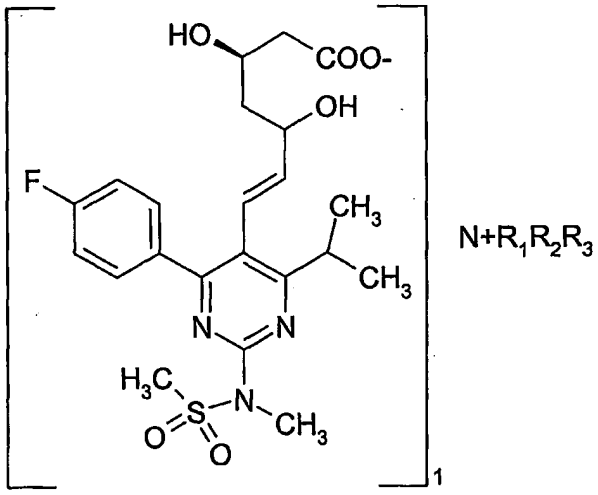
b) optionally isolating rosuvastatin acid or a lactone thereof;

c) adding a base and calcium ions;

d) isolating amorphous rosuvastatin calcium; and

e) optionally converting amorphous rosuvastatin calcium to crystalline rosuvastatin calcium.

8. A process for the preparation of amorphous rosuvastatin calcium from amine salt rosuvastatin of Formula I



or solvate, hydrate, crystalline or amorphous form thereof, in which the amine residue has a Formula $NR_1R_2R_3$ (wherein independently R_1, R_2 and R_3 are H, straight or branched chain C_{1-15} alkyl or hydroxyalkyl, C_{3-10} single or fused ring optionally substituted cycloalkyl, optionally substituted aryl, optionally substituted aralkyl, alkylcycloalkyl, or independently R_1, R_2 and R_3 combine with each other to form a C_{3-7} membered cycloalkyl ring or heterocyclic residue containing one or more heteroatoms), with a proviso that the amine is not selected from ammonia, methylamine, ethylamine, diethanolamine, tri(hydroxymethyl)-methylamine, benzylamine, or 4-methoxybenzylamine,

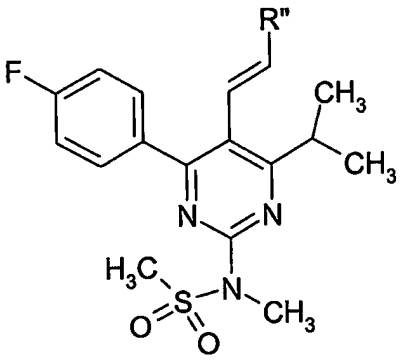
the process comprising

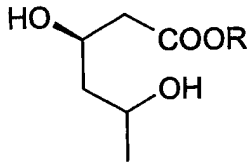
a) treating an amine salt of rosuvastatin with a base and a calcium ions; and

b) isolating the amorphous rosuvastatin calcium from the reaction mass.

9. Amorphous rosuvastatin calcium prepared by a process according to claims 7 and 8 having a purity of at least above 99% having less than 0.5% of diastereomeric impurity.

10. A process for preparation of amorphous or crystalline rosuvastatin magnesium of





FORMULA A

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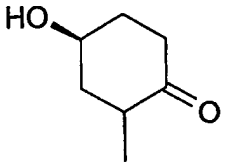
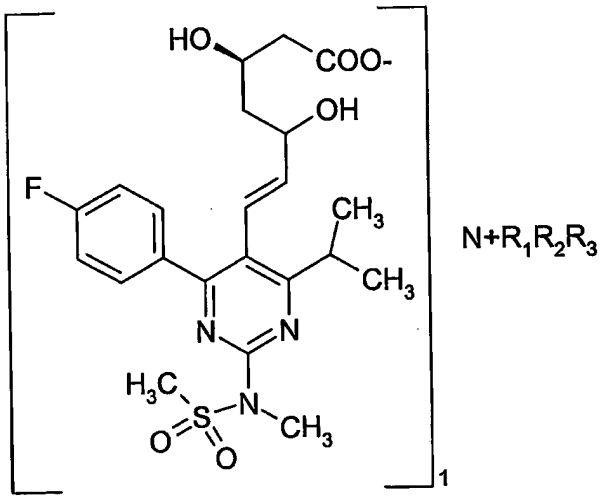


FORMULA B

Formula IIb

from amine salt of Formula I,



or solvate, hydrate, crystalline or amorphous form thereof, in which the amine residue has a Formula $NR_1R_2R_3$ (wherein independently R_1, R_2 and R_3 are H, straight or branched chain C_{1-15} alkyl or hydroxyalkyl, C_{3-10} single or fused ring optionally substituted cycloalkyl, optionally substituted aryl, optionally substituted aralkyl, alkylcycloalkyl, or independently R_1, R_2 and R_3 combine with each other to form a C_{3-7} membered cycloalkyl ring or heterocyclic residue containing one or more heteroatoms), with a proviso that the amine is not selected from ammonia, methylamine, ethylamine, diethanolamine, tri(hydroxymethyl)-methylamine, benzylamine, or 4-methoxybenzylamine,

wherein the process comprises:

a) treating an amine salt of Formula I with an acid;

b) optionally isolating rosuvastatin acid or a lactone thereof;

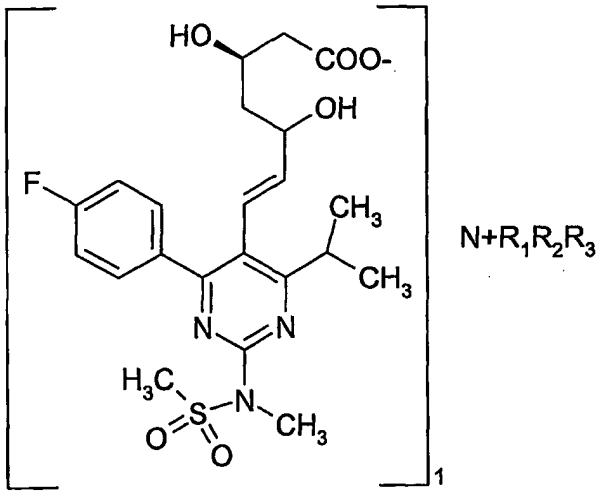
c) adding a base and magnesium ions;

d) isolating crystalline rosuvastatin magnesium; and

e) optionally converting crystalline rosuvastatin magnesium to amorphous rosuvastatin magnesium.

11. A process according to claim 10 wherein the acid is selected from inorganic mineral acids or organic acids.

12. A process for the preparation of amorphous rosuvastatin magnesium from amine salt of rosuvastatin of Formula I



or solvate, hydrate, crystalline or amorphous form thereof, in which the amine residue has a Formula $NR_1R_2R_3$ (wherein independently R_1, R_2 and R_3 are H, straight or branched chain C_{1-15} alkyl or hydroxyalkyl, C_{3-10} single or fused ring optionally substituted cycloalkyl, optionally substituted aryl, optionally substituted aralkyl, alkylcycloalkyl, or independently R_1, R_2 and R_3 combine with each other to form a C_{3-7} membered cycloalkyl ring or heterocyclic residue containing one or more heteroatoms), with a proviso that the amine is not selected from ammonia, methylamine, ethylamine, diethanolamine, tri(hydroxymethyl)-methylamine, benzylamine, or 4-methoxybenzylamine,

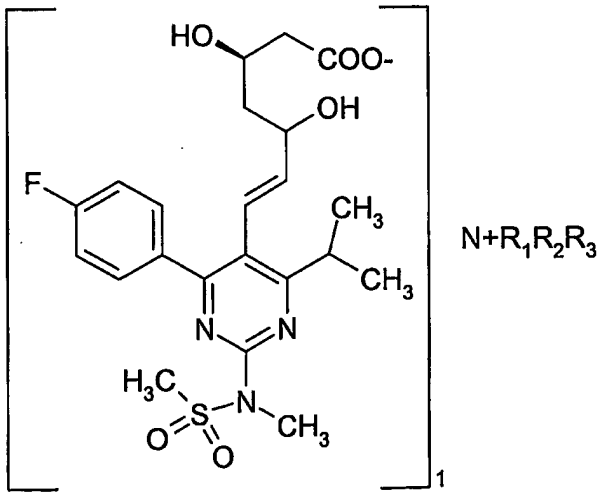
which comprises:

a) treating an amine salt of rosuvastatin with a base and a magnesium ions; and

b) isolating the crystalline rosuvastatin magnesium from the reaction mass.

13. Highly pure rosuvastatin calcium or rosuvastatin magnesium in crystalline or amorphous form thereof having purity of at least above 99.5% and diastereomeric impurity less than 0.25%.

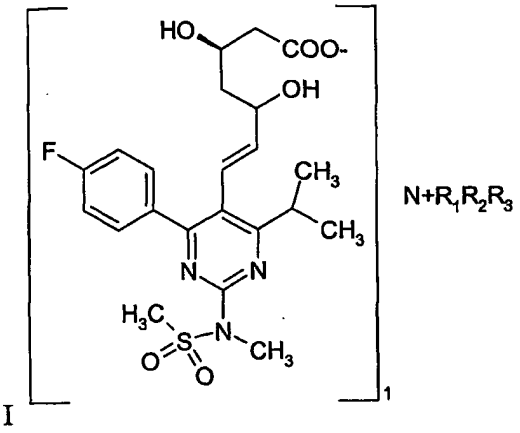
14. A cyclohexyl ammonium salt of Formula I



wherein R_1 and R_2 are hydrogen and R_3 is cyclohexyl group.

15. The cyclohexyl ammonium salt of claim 14, having the X-ray diffraction pattern (XRD) as provided in Figure 1.

16. A diisopropyl ammonium salt of Formula

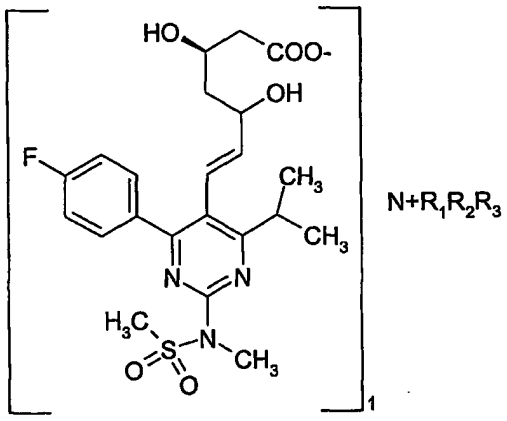


I

wherein R_1 and R_2 are isopropyl groups and R_3 is hydrogen.

17. The diisopropyl ammonium salt of claim 16 having the X-ray diffraction pattern (XRD) as provided in Figure 2.

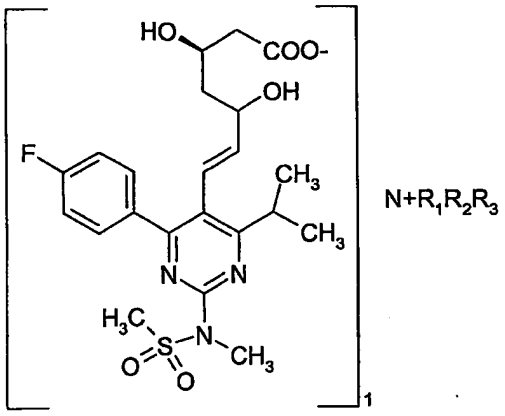
18. An isopropyl ammonium salt of Formula I



wherein R_1 and R_2 are hydrogen and R_3 is isopropyl.

19. The isopropyl ammonium salt of claim 18, having the X-ray diffraction pattern (XRD) as provided in Figure 3.

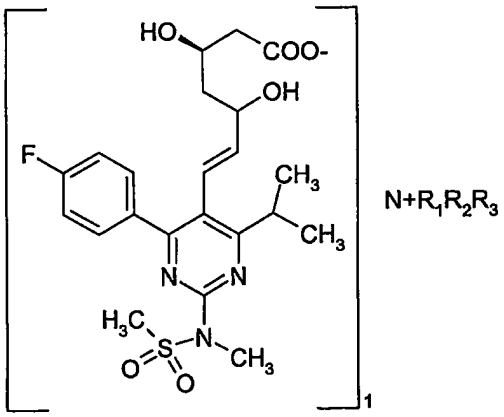
20. A dicyclohexyl ammonium salt of Formula I



wherein R_1 and R_2 are cyclohexyl groups and R_3 is hydrogen.

21. The dicyclohexyl ammonium salt of claim 20, having the X-ray diffraction pattern (XRD) as provided in Figure 4.

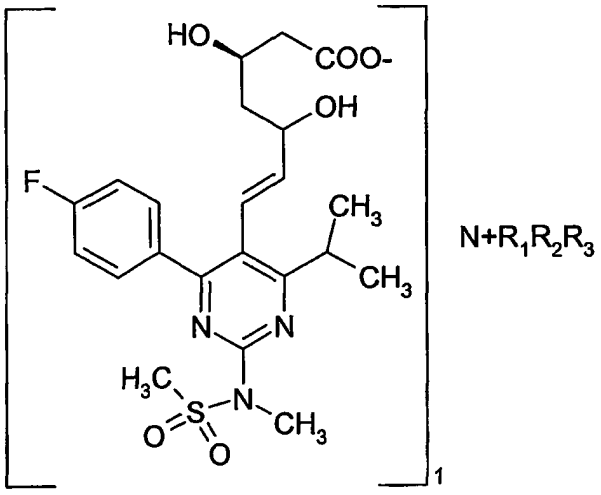
22. A (S) (+)- □-methylbenzyl ammonium salt of Formula I



wherein R_1 and R_2 are hydrogen and R_3 is (S) (+)- □-methylbenzyl group.

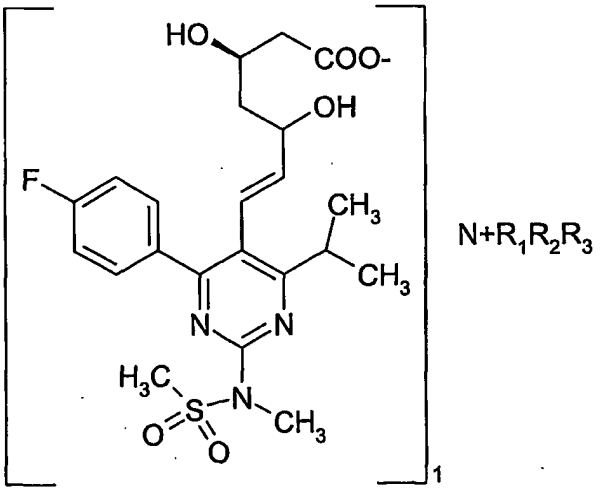
23. The (S) (+)- □-methylbenzyl ammonium salt of claim 22, having the X-ray diffraction pattern (XRD) as provided in Figure 5.

24. A pharmaceutical composition comprising amine salts of rosuvastatin of Formula I



or solvate, hydrate, crystalline or amorphous form thereof, in which the amine residue has a Formula $NR_1R_2R_3$ (wherein independently R_1, R_2 and R_3 are H, straight or branched chain C_{1-15} alkyl or hydroxyalkyl, C_{3-10} single or fused ring optionally substituted cycloalkyl, optionally substituted aryl, optionally substituted aralkyl, alkylcycloalkyl, or independently R_1, R_2 and R_3 combine with each other to form a C_{3-7} membered cycloalkyl ring or heterocyclic residue containing one or more heteroatoms), with a proviso that the amine is not selected from ammonia, methylamine, ethylamine, diethanolamine, tri(hydroxymethyl)-methylamine, benzylamine, or 4-methoxybenzylamine, with a pharmaceutically acceptable diluent or carrier.

25. A method of treating disease conditions wherein HMG-CoA is implicated, which comprises of administering to a mammal in need thereof a therapeutically effective amount of amine salt of rosuvastatin of Formula I



or solvate, hydrate, crystalline or amorphous form thereof, in which the amine residue has a Formula $NR_1R_2R_3$ (wherein independently R_1, R_2 and R_3 are H, straight or branched chain C_{1-15} alkyl or hydroxyalkyl, C_{3-10} single or fused ring optionally substituted cycloalkyl, optionally substituted aryl, optionally substituted aralkyl, alkylcycloalkyl, or independently R_1, R_2 and R_3 combine with each other to form a C_{3-7} membered cycloalkyl ring or heterocyclic residue containing one or more heteroatoms), with a proviso that the amine is not selected from ammonia, methylamine, ethylamine, diethanolamine, tri(hydroxymethyl)-methylamine, benzylamine, or 4-methoxybenzylamine.